UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,560	10/17/2001	Samuel Neely Hopper	BLD920010018US1	7167

7590	01/12/2004	**EXAMINER**
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ART UNIT	PAPER NUMBER
2636	

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/981,560	HOPPER ET AL.
	Examiner	Art Unit
	Hung T. Nguyen	2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _29 October 2003_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-66_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _1-5,7-13,15-40,42-48 & 50-58_ is/are rejected.

7)☒ Claim(s) _6,14,41,49 and 59-66_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-5, 8-13, 16, 19-22, 24-40, 43-48, 49, 51 & 54-57 are rejected under 35 U.S.C.

103(a) as being unpatentable over Cruz-Uribe et al. (U.S. 4,413,264) in view of Garr et al.(U.S.

5,802,420).

Regarding claim 1, Cruz-Uribe discloses a method for monitoring depletion of a consumable

source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and

col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored

system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to

col.2, line 16 and col.3, lines 2-16];

- estimating or predicting an amount of source remaining / toner (24) after the monitored

system processes the at least one unit of work (10) , wherein the estimate is a function of the

determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines

2-43].

Cruz-Uribe does not specifically mention the method generating a graphic element for display on a computer monitor indicating the estimate a mount of the source remaining .

However, Garr teaches a method and apparatus of a printer (10) includes a graphical gauge element (504) will display the approximate quantity of the toner remaining in the cartridge (90) on a screen (500) of a host computer that is connected to the printer. The computer monitor (500) shows a "gas gauge" (512) indicating the amount of toner remaining in the cartridge and a bar graph indicating the estimated sheets or pages remaining [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to have the teaching of Garr in the system of Cruz-Uribe for monitoring depletion of consumable source in the printing industry by the graphical display for allowing the users or operators to monitor the actual usage of the toner as well as to obtain information as to when a toner cartridge is expected to be empty .

Regarding claims 2-3, 19 & 54, Garr discloses the graphic display (500) comprises a graphical gauge displaying a range of values from zero (0) to maximum capacity (9) includes a needle / dial (512) on the gauge pointing to a position on the gauge indicating the estimated amount of the resource remaining / toner (504) [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Regarding claims 4, 8, 21 , 27, 35 & 56, Cruz-Uribe & Garr do not specifically mention a plurality of printers can be connected to the host computer for monitoring depletion of a consumable source as a printing equipment in a monitored system.

However, Garr clearly discloses the computer monitor (500) at the host computer that displays the current toner level as well as the toner estimating information concerning the laser printer (10) and there are at least three different toner sizes (4,000 , 7,500 & 17,6000 pages)

available for a single printer family can be monitored by the host computer monitoring system [figs.1,7, col.3, lines 13-45 , col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to recognize that the system of Cruz-Uribe & Garr can be utilized / programmed for monitoring depletion of consumable source as toners in the printing industry by the graphical display for rendering on a computer monitor is generated indicating the estimated amount of the sources remaining in the multiple printers as desired .

Regarding claims 5 & 13, Cruz-Uribe discloses the receiving notification that the consumable resource is depleted in the monitored system / controller electronic (14) with a memory device (36) and determining an adjustment factor after the consumable source as a toner is replenished in the monitored system [fig.1, col.1, lines 14-22 , col.1, line 64 to col.2, line 66 and col.3, lines 2-43].

Regarding claim 9, Cruz-Uribe discloses a method for monitoring depletion of a consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and col.1, line 64 to col.2, line 66] comprising:
- receiving a print job / printer (10) having print matter for at least one page by the monitored system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];
- determining (34) a rate of source depletion per page [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];
- estimating or predicting an amount of source remaining / toner (24) after the monitored system processes the at least one unit of work (10) , wherein the estimate is a function of the determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-43].

Cruz-Uribe does not specifically mention the method generating a graphic element for display on a computer monitor indicating the estimate a mount of the source remaining .

However, Garr teaches a method and apparatus of a printer (10) includes a graphical gauge element (504) will display the approximate quantity of the toner remaining in the cartridge (90) on a screen (500) of a host computer that is connected to the printer. The computer monitor (500) shows a "gas gauge" (512) indicating the amount of toner remaining in the cartridge and a bar graph indicating the estimated sheets or pages remaining [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to have the teaching of Garr in the system of Cruz-Uribe for monitoring depletion of consumable source in the printing industry by the graphical display for allowing the users or operators to monitor the actual usage of the toner as well as to obtain information as to when a toner cartridge is expected to be empty .

Regarding claims 10-11 & 29, Garr does mention different printers can be connected to the host computer for monitoring depletion of a consumable source as a printing equipment / laser printer (10) in a monitored system includes three different toner sizes (4,000 , 7,500 & 17,6000 pages) available for a single printer family with identification codes are stored in the EEPROM at the RIP level in the printer which could be included a printer model and a unique name of the printer is inherently [figs.1,7, col.15, line 52 to col.16, line 24 and col.17, line 61 to col.18, line 46].

Regarding claim 12, Garr discloses the toner represents a type of inking material that forms black , colored , thermal wax and different material on a print media which could be detected by the processing unit / microprocessor (70) and ASIC (40) in communication with the monitored

system / laser printer (10) and the computer monitor (500) for determining the rate of source depletion [figs.1,7, col.7, line 51 to col.8, line 46].

Regarding claims 16 & 22, Cruz-Uribe discloses a method for monitoring depletion of a consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- estimating or determining an amount of source remaining / toner (24) after the monitored system processes the at least one unit of work (10) , wherein the estimate is a function of the determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-43] and Garr discloses a method for monitoring depletion of a consumable source as a printing equipment / laser printer (10) in a monitored system [figs.1,7, col.1, lines 7-14 and col.3, lines 24-45] comprising:

- determining a rate / level change of source depletion per unit work processed / laser printer (10) [figs.1,7, col.3, lines 24-45 and col.13, lines 34-50];

- estimating an amount of source remaining / toner (504) after the monitored system / host computer (500) processes the at least one unit of work . The laser printer (10) can measure an actual toner or ink level within the printer's toner cartridge [figs.1,7, col.3, lines 24-45 , col.13, lines 34-50 and col.17, line 61 to col.18, line 46].

Regarding claims 20 & 55, Garr discloses the toner represents a type of inking material that forms black or colored on a print media [col.7, lines 63-67].

Regarding claims 24 & 28, Cruz-Uribe discloses a method for monitoring depletion of a

consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-

12 and col.1, line 64 to col.2, line 66] comprising:

- a monitoring system (14) that uses the consumable resource [fig.1, col.2, lines 49-66];

- a processing unit (36) in communication with the monitor system [fig.1, col.3, lines 17-43];

- receiving information on at least one unit / printer (10) to be processed by the monitored

system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to

col.2, line 16 and col.3, lines 2-16];

- estimating or predicting an amount of source remaining / toner (24) after the monitored

system processes the at least one unit of work (10) , wherein the estimate is a function of the

determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines

2-43].

Cruz-Uribe does not specifically mention the method generating a graphic element for

display on a computer monitor indicating the estimate a mount of the source remaining .

However, Garr teaches a method and apparatus of a printer (10) includes a graphical

gauge element (504) will display the approximate quantity of the toner remaining in the cartridge

(90) on a computer screen (500) of a host computer that is connected to the printer. The

computer monitor (500) shows a "gas gauge" (512) indicating the amount of toner remaining in

the cartridge and a bar graph indicating the estimated sheets or pages remaining [figs.1,7, col.13,

lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to have the

teaching of Garr in the system of Cruz-Uribe for monitoring depletion of consumable source in

the printing industry by the graphical display on the computer monitor which for allowing the

users or operators to monitor the actual usage of the toner as well as to obtain information as to when a toner cartridge is expected to be empty .

Regarding claim 25, Garr discloses the graphic display (500) comprises a graphical gauge displaying a range of values from zero (0) to maximum capacity (9) includes a needle / dial (512) on the gauge pointing to a position on the gauge indicating the estimated amount of the resource remaining / toner (504) [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Regarding claims 26 & 31, Cruz-Uribe discloses the receiving notification that the consumable resource is depleted in the monitored system / controller electronic (14) with a memory device (36) and determining an adjustment factor after the consumable source as a toner is replenished in the monitored system [fig.1, col.1, lines 14-22 , col.1, line 64 to col.2, line 66 and col.3, lines 2-43].

Regarding claim 30, Garr discloses the toner represents a type of inking material that forms black , colored , thermal wax and different material on a print media which could be detected by the processing unit / microprocessor (70) and ASIC (40) in communication with the monitored system / laser printer (10) and the computer monitor (500) for determining the rate of source depletion [figs.1,7, col.7, line 51 to col.8, lines 46].

Regarding claim 32, Cruz-Uribe discloses a method for monitoring depletion of a consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- estimating or determining an amount of source remaining / toner (24) after the monitored system processes the at least one unit of work (10) , wherein the estimate is a function of the determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-43].

Regarding claim 33, Garr discloses the system for monitoring depletion of a consumable resource comprises the processing unit / microprocessor (70) and ASIC (40) in communication with the monitored system (10) and the computer monitor (500) [figs.1,7, col.7, line 51 to col.8, lines 46];

- a monitored system / laser printer (10) that uses the consumable resource as a toner [figs.1,7, col.3, lines 24-45 and col.13, lines 34-50];

- estimating an amount of source remaining / toner (504) after the monitored system / host computer (500) processes the at least one unit of work . The laser printer (10) can measure an actual toner or ink level within the printer's toner cartridge [figs.1,7, col.3, lines 24-45 , col.13, lines 34-50 and col.17, line 61 to col.18, lines 15-46];

- the graphic display (500) comprises a graphical gauge displaying a range of values from zero (0) to maximum capacity (9) includes a needle / dial (512) on the gauge pointing to a position on the gauge indicating the estimated amount of the resource remaining / toner (504) [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Regarding claim 34, Garr discloses the toner represents a type of inking material that forms black or colored on a print media [col.7, lines 63-67].

Regarding claims 36 & 44, Cruz-Uribe discloses a method for monitoring depletion of a

consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-

12 and col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored

system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to

col.2, line 16 and col.3, lines 2-16];

- estimating or determining an amount of source remaining / toner (24) after the monitored

system processes the at least one unit of work (10) , wherein the estimate is a function of the

determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines

2-43].

Cruz-Uribe does not specifically mention a code is used in the method generating a

graphic element for display on a computer monitor indicating the estimate a mount of the source

remaining .

However, Garr clearly discloses a different and better way to display output information

on the computer monitor (500) by a "gas gauge" to alert a printing management / operator for

showing more accurate and clearly warning information [figs.1,7, col.13, lines 34-50 and col.18,

lines 15-46];

- estimating an amount of source remaining / toner (504) after the monitored system / host

computer (500) processes the at least one unit of work . The laser printer (10) can measure an

actual toner or ink level within the printer's toner cartridge [figs.1,7, col.3, lines 24-45 , col.13,

lines 34-50 and col.17, line 61 to col.18, lines 15-46];

- generating a graphic element for display on a computer monitor (500) indicating the estimate

a mount of the source remaining / toner (504) [figs.1,7, col.13, lines 34-50 and col.18, lines 15-

46].

- the graphic display (500) comprises a graphical gauge displaying a range of values from zero (0) to maximum capacity (9) includes a needle / dial (512) on the gauge pointing to a position on the gauge indicating the estimated amount of the resource remaining / toner (504) [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Garr in the system of system Cruz-Uribe includes the monitor screen (500) feature as showing a "gas gauge" for indicating more accurately updated the amount of the toners remaining in the cartridge without using a code which may confuse to a user / operator .

Regarding claims 37-38, Garr discloses the graphic display (500) comprises a graphical gauge displaying a range of values from zero (0) to maximum capacity (9) includes a needle / dial (512) on the gauge pointing to a position on the gauge indicating the estimated amount of the resource remaining / toner (504) [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Regarding claim 39, Both Cruz-Uribe & Garr do not specifically mention a plurality of printers can be connected to the host computer for monitoring depletion of a consumable source as a printing equipment in a monitored system.

However, Cruz-Uribe discloses a method for monitoring depletion of a consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16] ;

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- estimating or predicting an amount of source remaining / toner (24) after the monitored

system processes the at least one unit of work (10) , wherein the estimate is a function of the

determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines

2-43] and

Garr discloses the computer monitor (500) at the host computer that displays the current

toner level as well as the toner prediction information concerning the laser printer (10) and there

are three different toner sizes (4,000 , 7,500 & 17,6000 pages) available for a single printer

family [figs.1,7, col.3, lines 13-45 , col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to recognize

that the system of Cruz-Uribe & Garr can be utilized / programmed for monitoring depletion of

consumable source as toners includes black and / or colors in the printing industry by the

graphical display for rendering on a computer monitor is generated indicating the estimated

amount of the sources remaining.

Regarding claim 40, Cruz-Uribe discloses the receiving notification that the consumable resource

is depleted in the monitored system / controller electronic (14) with a memory device (36) and

determining an adjustment factor after the consumable source as a toner is replenished in the

monitored system [fig.1, col.1, lines 14-22 , col.1, line 64 to col.2, line 66 and col.3, lines 2-43].

Regarding claim 43, Both Cruz-Uribe & Garr do not specifically mention a plurality of printers

can be connected to the host computer for monitoring depletion of a consumable source as a

printing equipment in a monitored system.

However, Cruz-Uribe discloses a method for monitoring depletion of a consumable

source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and

col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored

system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16] ;

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to

col.2, line 16 and col.3, lines 2-16];

- estimating or predicting an amount of source remaining / toner (24) after the monitored

system processes the at least one unit of work (10) , wherein the estimate is a function of the

determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines

2-43] and

Garr discloses the computer monitor (500) at the host computer that displays the current

toner level as well as the toner prediction information concerning the laser printer (10) and there

are three different toner sizes (4,000 , 7,500 & 17,6000 pages) available for a single printer

family [figs.1,7, col.3, lines 13-45 , col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to recognize

that the system of Cruz-Uribe & Garr can be utilized / programmed for monitoring depletion of

consumable source as toners includes black and / or colors in the printing industry by the

graphical display for rendering on a computer monitor is generated indicating the estimated

amount of the sources remaining.

Regarding claims 45-46, Garr does mention different printers can be connected to the host

computer for monitoring depletion of a consumable source as a printing equipment / laser printer

(10) in a monitored system includes at least three different toner sizes (4,000 , 7,500 & 17,6000

pages) available for a single printer family with identification codes are stored in the EEPROM

at the RIP level in the printer which could be included a printer model and a unique name of the

printer is inherently [figs.1,7, col.15, line 52 to col.16, line 24 and col.18, lines 15-46].

Regarding claim 47, Garr discloses the toner represents a type of inking material that forms

black , colored , thermal wax and different material on a print media which could be detected by

the processing unit / microprocessor (70) and ASIC (40) in communication with the monitored

system / laser printer (10) and the computer monitor (500) for determining the rate of source

depletion [figs.1,7, col.7, line 51 to col.8, lines 46].

Regarding claim 48, Cruz-Uribe discloses the receiving notification that the consumable resource

is depleted in the monitored system / controller electronic (14) with a memory device (36) and

determining an adjustment factor after the consumable source as a toner is replenished in the

monitored system [fig.1, col.1, lines 14-22 , col.1, line 64 to col.2, line 66 and col.3, lines 2-43].

Regarding claims 51 & 57, Cruz-Uribe discloses a method for monitoring depletion of a

consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-

12 and col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored

system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to

col.2, line 16 and col.3, lines 2-16];

- estimating or determining an amount of source remaining / toner (24) after the monitored

system processes the at least one unit of work (10) , wherein the estimate is a function of the

determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines

2-43] and Garr discloses a method for monitoring depletion of a consumable source as a printing

equipment / laser printer (10) in a monitored system [figs.1,7, col.1, lines 7-14 and col.3, lines

24-45] comprising:

- determining a rate / level change of source depletion per unit work processed / laser printer

(10) [figs.1,7, col.3, lines 24-45 and col.13, lines 34-50];

- estimating an amount of source remaining / toner (504) after the monitored system / host

computer (500) processes the at least one unit of work . The laser printer (10) can measure an

actual toner or ink level within the printer's toner cartridge [figs.1,7, col.3, lines 24-45 , col.13,

lines 34-50 and col.17, line 61 to col.18, line 46].

3.   Claims 7 , 15 , 42 & 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cruz-Uribe et al. (U.S. 4,413,264) in view of Garr et al.(U.S. 5,802,420) further in view of

Samuels (U.S. 5,937,225).

Regarding claims 7 , 15 , 42 & 50, The combination of Cruz-Uribe & Garr are still missing a

generating a message signal for indicating that there is not a sufficient amount of resource in the

printing machine .

Samuels teaches a technique of using a message display signal (40) for notifying the

printing operator to monitor the actual usage of toner as well as to obtain information when a

toner cartridge is expected to be empty [fig.3, col.4, lines 5-17 , lines 47-50 , col.5, lines 10-17

and col.6, lines 24-32].

Therefore, it would have been obvious to one having ordinary skill in the art to utilize the

teaching of Garr and Samuels includes message signal feature in the system of Cruz-Uribe

which allows the user / operator to keep track of the toner usage since the toner has been refilled

or replaced .

4.   Claims 17-18 & 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cruz-Uribe et al. (U.S. 4,413,264) in view of Garr et al.(U.S. 5,802,420) further in view of

Acquaviva et al. (U.S. (U.S. 5,459,556).

Regarding claims 17-18 & 52-53, Cruz-Uribe & Garr fail to mention the determined attributes of

the print job includes contrast and boldness / also providing a contrast table and boldness table

respectively for setting.

        We know almost every copy machine we are using at the present time has contrast and

boldness functions for users setting from lighter / darker or low , med , and high levels as desired

on the copy machine .

        Garr discloses a laser printer (10) includes ASIC (40) which acts as a controller and data

manipulating device for the various hardware components within the print engine (36) , Read

only Memory (ROM) (16) and Random Access Memory (RAM) (30) which divided into several

portions for performing several different functions to process of rasterization , a font pool and so

on [fig.1, col.4, line 39 to col.5, line 45]. Furthermore, Acquaviva teaches a printer that can

measure the toner usage per print. The operator's actuable setting can effect the toner usage and

this is taken into account. These operator actuable settings (82) includes the contrast and the

lighter / darker controls (94) [figs.1,4, col.6, lines 1-29 and col.7, lines 39-51].

        Therefore, it would have been obvious to one having ordinary skill in the art to use the

system of Cruz-Uribe & Garr as taught by Acquaviva for the user controlling the setting contrast

and boldness level of the toner before printing a copy .

5.   Claims 23 & 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cruz-Uribe et al. (U.S. 4,413,264) in view of Garr et al.(U.S. 5,802,420) further in view of Sotack et al. (U.S. (U.S. 5,465,619).

Regarding claims 23 & 58, Cruz-Uribe & Garr do not specifically discloses the monitored consumable resource is a fuser oil .

Fuser oil is used in the printing equipment to provide improvement of oil distribution on the copy and can be equipped with a cleaning system to remove pick-up impurities.

However, Garr discloses the toner represents a type of inking material that forms black , colored , thermal wax and different material on a print media which could be detected by the processing unit / microprocessor (70) and ASIC (40) in communication with the monitored system / laser printer (10) and the computer monitor (500) for determining the rate of source depletion [figs.1,7, col.7, line 51 to col.8, lines 46] and furthermore, Sotack teaches an apparatus for detecting (402) the level of material such as fuser oil in a container (424) of the printing machine [figs.8,12, col.15, lines 19-47].

Therefore, it would have been obvious to one having ordinary skill in the art to have the system of Cruz-Uribe & Garr as taught by Sotack for monitoring the estimate amount of the fuser oil remaining in the printing machine and providing information to the users , service technicians or others to track machine requirements and enhance performance .

Allowable Subject Matter

6   Claims 6, 14, 41, 49 & 59-66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Arguments & Responses

7.   Applicant's arguments filed on Oct. 29, 2003 have been fully considered but they are not

persuasive reason.

Applicant's Arguments:

a)   The applicant states that the combination reference of Cruz-Uribe & Garr are not

overcome the present invention claims.

b)   The Cruz-Uribe's reference fails to teach the claim requirement of estimating an

amount of resource remaining after the monitored system processes the at least one unit of work.

c)   The Garr's reference does not suggest the estimate is to be based on the number of one

work remain to be processed.

Response to arguments:

a)   The references of Cruz-Uribe & Garr can be combined for rejection in the following:

Regarding claim 1, Cruz-Uribe discloses a method for monitoring depletion of a consumable

source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and

col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored

system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- estimating or predicting an amount of source remaining / toner (24) after the monitored system processes the at least one unit of work (10) , wherein the estimate is a function of the determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-43].

Cruz-Uribe does not specifically mention the method generating a graphic element for display on a computer monitor indicating the estimate a mount of the source remaining .

However, Garr teaches a method and apparatus of a printer (10) includes a graphical gauge element (504) will display the approximate quantity of the toner remaining in the cartridge (90) on a screen (500) of a host computer that is connected to the printer. The computer monitor (500) shows a "gas gauge" (512) indicating the amount of toner remaining in the cartridge and a bar graph indicating the estimated sheets or pages remaining [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to have the teaching of Garr in the system of Cruz-Uribe for monitoring depletion of consumable source in the printing industry by the graphical display for allowing the users or operators to monitor the actual usage of the toner as well as to obtain information as to when a toner cartridge is expected to be empty .

Regarding claim 9, Cruz-Uribe discloses a method for monitoring depletion of a consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and col.1, line 64 to col.2, line 66] comprising:

- receiving a print job / printer (10) having print matter for at least one page by the monitored system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per page [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- estimating or predicting an amount of source remaining / toner (24) after the monitored system processes the at least one unit of work (10) , wherein the estimate is a function of the determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-43].

Cruz-Uribe does not specifically mention the method generating a graphic element for display on a computer monitor indicating the estimate a mount of the source remaining .

However, Garr teaches a method and apparatus of a printer (10) includes a graphical gauge element (504) will display the approximate quantity of the toner remaining in the cartridge (90) on a screen (500) of a host computer that is connected to the printer. The computer monitor (500) shows a "gas gauge" (512) indicating the amount of toner remaining in the cartridge and a bar graph indicating the estimated sheets or pages remaining [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to have the teaching of Garr in the system of Cruz-Uribe for monitoring depletion of consumable source in the printing industry by the graphical display for allowing the users or operators to monitor the actual usage of the toner as well as to obtain information as to when a toner cartridge is expected to be empty .

Regarding claims 36 & 44, Cruz-Uribe discloses a method for monitoring depletion of a consumable source as a printing equipment (10) in a monitored system (14) [fig.1, col.1, lines 6-12 and col.1, line 64 to col.2, line 66] comprising:

- receiving information on at least one unit / printer (10) to be processed by the monitored system (14) [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- estimating or determining an amount of source remaining / toner (24) after the monitored system processes the at least one unit of work (10) , wherein the estimate is a function of the determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-43].

Cruz-Uribe does not specifically mention a code is used in the method generating a graphic element for display on a computer monitor indicating the estimate a mount of the source remaining .

However, Garr clearly discloses a different and better way to display output information on the computer monitor (500) by a "gas gauge" to alert a printing management / operator for showing more accurate and clearly warning information [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46];

- estimating an amount of source remaining / toner (504) after the monitored system / host computer (500) processes the at least one unit of work . The laser printer (10) can measure an actual toner or ink level within the printer's toner cartridge [figs.1,7, col.3, lines 24-45 , col.13, lines 34-50 and col.17, line 61 to col.18, lines 15-46];

- generating a graphic element for display on a computer monitor (500) indicating the estimate a mount of the source remaining / toner (504) [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46];

- the graphic display (500) comprises a graphical gauge displaying a range of values from zero (0) to maximum capacity (9) includes a needle / dial (512) on the gauge pointing to a position on the gauge indicating the estimated amount of the resource remaining / toner (504) [figs.1,7, col.13, lines 34-50 and col.18, lines 15-46].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Garr in the system of system Cruz-Uribe includes the monitor screen (500) feature as showing a "gas gauge" for indicating more accurately updated the amount of the toners remaining in the cartridge without using a code which may confuse to a user / operator .

b)   Cruz-Uribe discloses a method for monitoring depletion of a consumable source as a printing equipment (10) in a monitored system (14) comprising:

- determining (34) a rate of source depletion per unit work processed [fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-16];

- estimating or determining an amount of source remaining / toner (24) after the monitored system processes the at least one unit of work (10) , wherein the estimate is a function of the determined rate of resource depletion [fig.1, fig.1, col.1, line 64 to col.2, line 16 and col.3, lines 2-43].

c)   The Garr's reference clearly teaches the predicting and displaying toner usage of a printer which can be used to judge the amount of toner used for one printing unit [figs.1,7, col.3, lines 24-45 , col.13, lines 34-50 and col.17, line 61 to col.18, lines 15-46 and abstract].

Conclusion

8.   THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filled within TWO MONTHS of

the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTHS shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, any extension fee pursuant to 37 CFR 1.136(a) will calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
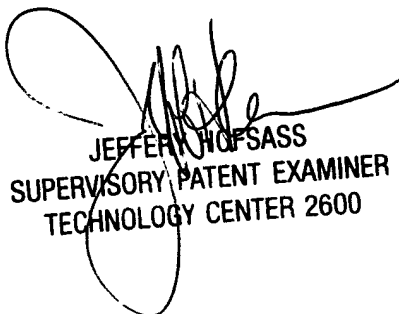
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Nguyen whose telephone number is (703) 308-6796. The examiner can normally be reached on Monday to Friday from 8:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass, Jeffery can be reached on (703) 305-4717. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Examiner: Hung T. Nguyen

Date: Jan. 11, 2004

JEFFERY HOFSASS
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